

Listing of the Claims:

1. (Previously Presented) A system for interacting with displays and devices that use such displays comprising:
 - a display configured to interact with a naked hand or finger of a human user;
 - a camera adapted to have in its field of view the naked hand or finger as the naked hand or finger is pointing to a region of the display or making a gesture to point to a region of the display
 - means for detecting the position of the naked hand or finger of the human user in an image registered by the camera, and;
 - means for establishing the mapping between the position of the naked hand or finger of the human user in the image registered by the camera and the corresponding region on the display.
2. (Previously Presented) A system as defined by claim 1 further comprising means for commanding the positioning of a pointing icon on the display.
3. (Previously Presented) A system as defined by claim 1 further comprising means for commanding the input of data into the device using the display.
4. (Cancelled.)
5. (Previously Presented) A system according to claim 1 further comprising means for selecting different regions of the display by way of changing the position, attitude, or presentation of the naked hand or finger of the human user.
6. (Previously Presented) A system according to claim 1 further comprising means for selecting, highlighting, or defining a particular point or region on the display.

7. (Previously Presented) A system according to claim 1 wherein the naked hand or finger defines a vector on the plane of the display that indicates a direction and magnitude relative to or with respect to an item on the display or a region of the display.

8. (Previously Presented) A system according to claim 2 wherein the pointing icon on the display can be registered by the camera that has in its field of view the naked hand or finger of the human user.

9. (Previously Presented) A system according to claim further comprising means for correcting the offsets between (i) the position of the naked hand or finger of the human user and (ii) the position of the pointer icon on the display.

10. (Previously Presented) A system as defined by claim 1 further comprising:

- a. means for selecting or highlighting a specific item or icon on the display,
- b. means for activating a specific process, program, or menu item represented on the display, and
- c. means for writing, scribing, drawing, highlighting, annotating, or otherwise producing marks on the display.

11. (Previously Presented) A method for detecting a position of a naked hand or finger of a human user in an image registered by a camera comprising the steps of:

- a. defining at least one characteristic of the human hand or finger of the human user that can be deduced by processing the image captured by the camera and distinguishing the naked hand or finger from all or at least a majority of other objects registered in the image from the camera,

- b. retrieving of the image from the camera,
- c. analyzing the image from the camera to locate the characteristic or characteristics of the naked hand or finger of the human user,
- d. determining the most likely position of the naked hand or finger of the human user in the image from the camera based on at least one of the following:

- (i) the last known position of the naked hand or finger in the image,

- (ii) the position or positions at which the at least one distinguishing characteristic of the naked hand or finger or the set of the picture elements in the image that comprise the rendition of the naked hand or finger.

12. (Previously Presented) A method according to claim 11 wherein at least one characteristic that distinguishes the naked hand or finger from other objects in the image registered by the camera is known a priori.

13. (Previously Presented) A method according to claim 11 wherein at least one characteristic that distinguishes the naked hand or finger in the image from the camera is determined based on analysis of at least one image of the same naked hand or finger acquired from the camera.

14. (Previously Presented) A method according to claim 13 wherein at least one characteristic that distinguishes the naked human hand or finger from other objects, whose rendition are present in the image from the camera, is obtained by

- a. acquiring at least two images from the camera, one with the pointing object in view of the or the camera and one without, and
- b. comparing the two sets with one another.

15. (Previously Presented) A method according to claim 11 wherein adjustments or modifications are made to the position, viewing angles, sensitivity, and other settings of the camera pursuant the analysis of the image retrieved from the camera.

16. (Previously Presented) A method according to claim 11 wherein at least part of the procedures for the method is carried out using at least in part the computing mechanisms available on one or more of the following: the display, or the camera, or the device producing the signal shown on the display, or the device producing the pointing icon on the display.

17. (Previously Presented) A method for establishing a mapping between a virtual display space for a human user interacting with a device with a display comprising the steps of:

- a. defining the boundaries of the positions that the naked hand or finger can assume in addressing points or regions on the device display and defining, within the said boundaries, a continuous virtual display surface,
- b. defining the boundaries of the device display and defining within the boundaries of the display, a continuous virtual display surface,
- c. segmenting the device display surface into at least two regions,
- d. segmenting the virtual display surface into at least two regions,
- e. warping the geometry of the surface virtual display so that at least one region of the virtual display surface overlaps with at least one region of the device display surface, and
- f. establishing a one-to-one or many to one correspondence between overlapping the regions of the virtual display surface and the device display surface, respectively.

18. (Previously Presented) A method according to claim 17 wherein the boundaries of the set of positions that the naked hand and finger can assume are

obtained by positioning a camera in a way such that the camera has in its view the naked hand or finger of the human user, and querying the user to position the naked hand or finger at the boundaries.

19 (Previously Presented) A method according to claim 17 wherein the boundaries of the set of positions that the naked hand or finger can assume are obtained by

- a. positioning a camera in a way such that the camera has in its field of view the human user,
- b. locating the human user in the image from the camera, and
- c. deducing the positions the hand or the finger of the user can assume from the position of the human user in the image from the camera.

20. (Previously Presented) A method according to claim 17 wherein the regions of the virtual display surface comprise at least two sets of pixel elements that comprise the image on the device display.

21. (Previously Presented) A method according to claim 17 wherein at least part of the procedures for the method is carried out using at least in part the computing mechanisms available on one or more of the following: the display, or the camera, or the device producing the signal shown on the display, or the device producing the pointing icon on the display.

Cancel claims 22 - 30.

31. (Previously Presented) A system according to claim 2, further comprising another camera and wherein the pointing icon on the display can be registered by the other camera.

32. (New) A system according to claim 1, wherein the means for detecting only detects the position of the naked hand or finger of the human user in an image registered by the camera without a display background.